



Secure Technology Application eXecution
DISA's Platform-as-a-Service (PaaS)
Frequently Asked Questions (FAQs)

**Defense Information Systems Agency
Enterprise Services Directorate
(ESD)**

**Version 1.1
August 23, 2012**

Revision History

Version	Primary Author(s)	Description of Version	Date Completed
1.0		Initial version for formal publication	
1.1	Michael J. Lampart	Updated layout, formatting, and branding Grammatical and hyperlink corrections	23-Aug-2012

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I. GENERAL

1. What is a Secure Technology Application eXecution (STAX)?

STAX provides infrastructure and technology that enables application development and deployment where the STAX provider (the Defense Information Systems Agency [DISA]) supplies and sustains all IT infrastructures, with resources available up to the application execution engine. It provides middleware, data stores, frameworks, and application integration interfaces.

2. What is DISA's Secure Technology Application eXecution (STAX)?

The DISA STAX is a cloud capability for developing, testing, and hosting DoD Java and Microsoft .NET web applications and services. DISA STAX provides computing, storage, and network infrastructure with middleware software for application code execution from a secure facility under a single pricing model with streamlined development evolution that speeds the delivery of new web-based mission capabilities to the field.

3. How is this different from DoD Cloud Computing?

DISA STAX is a key enabler of the DoD Cloud Computing Vision for acquiring and operating the most innovative, efficient, and agile IT in support of the Department's mission, anywhere, anytime, on any authorized device. For more information on the Government Cloud Computing Strategy, go to <http://www.cio.gov/documents/Federal-Cloud-Computing-Strategy.pdf>.

4. What is the difference between Secure Technology Application eXecution (STAX) and Infrastructure as a Service (IaaS)?

IaaS focuses on delivering basic hosting services, server hardware and operating system, storage, network, and security services in a secure facility with an appropriate support/operating model. STAX extends the infrastructure service to include middleware and datastores. It focuses on delivering application services, including application development/lifecycle; application environment for running workloads and fully abstracts the entire IT infrastructure so the customer can focus on developing the application that supports the desired functional capability.

5. How is STAX different than RACE?

STAX is a Web Platform as a Service (PaaS) similar to Google App Engine, Redhat Openshift, Microsoft's Azure that provides all the IT infrastructure for developing, testing, and deploying your web applications and web services. It provides everything up to the applications runtime engine and bundles a data store for a single price. The customer gets a Web Container, an Application Server, and a Database for a single price. The customer only has to worry about developing the application code and deploying the code onto the STAX runtime engine. The single price includes Dev, Test, Production, and COOP. The customer does not interface with the operating system in any environment. The customer is only required to provide a certificate of assurance from their DAA that their application code is clean and that the customer assumes full responsibility of all security for the application. Once the certificate of assurance is received by STAX and approved, within 24 hours, the customer is free to promote from dev to test to production without engaging DISA, and all environments remain in place for the customer to facilitate a more agile management of the application's lifecycle from dev to test to production.

RACE is an Infrastructure as a Service (IaaS) similar to Rackspace and Amazon's EC2 that provide operating environments for customers to install whatever software they want on top of the operating system. The customer has full system privileges at the operating system level and is responsible for all security patches. RACE currently only provides a development and a test environment. To promote from development to test, RACE requires an IATO at a minimum from the customer.

6. Is there an agreed definition of STAX in the industry? Does DISA STAX meet that definition?

Yes, DISA STAX is in-line with the STAX definitions in the industry today, as well as those published by the National Institute of Standards and Technology <http://csrc.nist.gov/publications/nistpubs/800-145/SP800-145.pdf>. STAX is driven by the needs of the Department of Defense (DoD) to rapidly and confidently leverage cloud computing for their business operations.

7. Does DISA STAX provide self-service functionality?

Yes, DISA STAX customers are able to place an order, access the development and test environments, and migrate their code to production through a self-service portal. It provides anywhere/anytime access for developing and deploying applications and services for the Warfighter's mission.

8. What languages does DISA STAX support?

DISA's STAX supports Java (web container and JEE) and .NET technologies.

9. What database support does DISA STAX offer?

DISA's STAX offers MySQL as the default datastore, with Microsoft's SQL Server and Oracle 11g as options.

10. Which Java Persistence API (JPA) does DISA STAX support?

DISA STAX offers the Hibernate JPA.

II. THE STAX PACKAGE

1. What is included in the DISA STAX package?

The DISA STAX includes a Java and .NET application engine, a datastore, integrated web framework that supports major industry technologies like RichFaces, Struts, Spring, Google Web Toolkit, protocol mediation, standardized application programming interfaces (APIs) for DoD enterprise services, DoD approved development and Test environments, self-service ordering and administration, situational awareness visibility, log viewer, full sustainment to include all Computer Network Defense (CND) functions, database administration, and software (SW) maintenance (patching), and a freely available software developer's toolkit (SDK) that includes all STAX technologies and APIs.

2. What are the ordering options?

DISA STAX is ordered as "Instances". A STAX instance includes the web, application, and database server components, plus all necessary middle-ware to support the development and deployment of web applications and services. The DISA STAX provides and supports a standardized suite of technologies and services through the entire process with streamlined development evolution that speeds the delivery of new web-based mission capabilities to the field process (development, test, pre-production and production) to facilitate rapid delivery of mission capabilities for the Warfighter.

3. Does DISA offer something other than space with its storage?

Yes, DISA offers backup to offline media and restoral, system administration of storage infrastructure and COOP services (People and Systems).

4. What are the different STAX instance types and environments available?

There are four different Instance types; 1) Development, 2) Test, 3) Pre-production, and 4) Production.

5. How many different STAX instance sizes are available?

There are three different sizes; 1) Small (Application Server 2 core x 2 GB Memory) + (Database 2 core x 4 GB memory) 2) Medium (2x4) + (4x8) 3) Large (4x8) + (8x16).

6. How flexible (elastic) is the sizing? Can the customer scale up or down as needed? Does it require a re-install of the app?

Horizontal scaling is supported today and would require an install of the application.

III. CUSTOMER RESPONSIBILITY

1. What are DISA STAX customers responsible for?

DISA STAX customers are responsible for providing fully developed and tested code that complies with the platform standards and DoD certification requirements for applications. The customer must also provide an assertion for their application code in order to activate the Testing, Pre-production, and Production environments. DISA is responsible for architecture support, which includes everything other than the application code provided by the customer

2. Are CNDSP and HBSS services included?

Yes, DISA will provide CNDSP and HBSS services with STAX packages

3. What happens if the customer does not pay to keep up with service packs, version upgrades?

Not applicable. Customers do not upgrade any STAX software. Customers are expected to sustain their code in conjunction with patches and upgrades identified for the STAX environment for the life of the application. Applications that fall outside of the supported STAX environment after the defined grace period for an upgrade may be subject to transition from a STAX environment to a customer environment at additional cost.

4. Can the customer stop, start, restart, delete, and add applications without involving a DISA help desk?

Yes. STAX offers a web-based administration utility that allows customers to stop and restart their applications running in STAX. It also allows customers to delete applications that are no longer in use, or are being upgraded with newer revisions.

5. How are application stigs performed above the platform stigs automatically provided?

It is customer responsibility to maintain application STIGS.

6. How can customers report platform related defects/bugs in during the development cycle and how will they be addressed?

Future code changes resulting in new versions will be posted in a new folder with the new version number. Inside that folder will be the Release Notes that explain the changes for that release.

Please use the Discussions feature at <https://software.forge.mil/sf/projects/javapaas> to open discussions about problems in development. Through the discussion forum the STAX team will determine the disposition of the problem (bug, feature, no action, etc.) and handle accordingly.

7. What if the customer has their testing tools that they want to use for development?

You can order a separate Operating Environment (OE) to load your test tools on, and have that OE be a member of your STAX development environment.

8. Can the customer get visibility into the usage of their STAX environment?

Yes. STAX offers a web-based utility that provides utilization information about the customer's STAX instances to their administration staff.

9. What if the customer has additional system components that do not need STAX, but the customer needs to include them in their development and test phases along with the STAX they are using?

When the customer purchases STAX, the STAX infrastructure for development, testing, and production is automatically provisioned. In the development and test environments the customer can add additional Operating Environments (OEs) and add them to the STAX environment. These additional OEs will only be loaded with the operating system of the customer's choice. The customer is responsible for loading and configuring all additional software. The customer should work with their identified DISA Customer Management Executive (CME) to acquire these additional OEs for Dev, Test, Pre-Production and/or Production. These additional systems will fall outside of the STAX type accreditation, thus requiring additional Certification and Accreditation (C&A) documentation and support by the application team.

10. If the customer provides database software, do they get some level of control over their configuration or files?

The Customer provides the software license key. The Customer has schema configuration control but not database administration level control. The Customer application development team will not have access to the databases and configuration files. Pre-production and Production DBAs will be DISA STAX support personnel and they will provide all software maintenance.

IV. PRICING

1. Why does DISA's storage service cost more than a typical commercial vendor offering?

DISA's Storage Service is a fully redundant, scalable, fast and reliable and offers the highest level of security available to DoD. The cost includes backup to offline media and restoral, system administration of storage infrastructure and COOP services - both People and Systems.

2. What is metered pricing?

DISA STAX features utility-based pricing that is based on the usage of the deployed applications. Usage will be measured by the number of transactions (HTTP/HTTPS Gets/Posts) supported by the system for the application. For more information, go to <https://www.intelink.gov/inteldocs/view.php?fDocumentId=1511761>.

3. Is Coop built into the package pricing?

Yes. DISA STAX has COOP built into the basic service offering. The price includes a 24-hour maximum restoral time objective (RTO) and restoral point objective (RPO) for technology and data.

4. Regarding the monthly pricing, for instance, the Small is listed at \$1,216 per month. Is the total cost for dev, test AND prod \$1,216 per month? Or is the \$1,216 the price for a dev, OR a test, OR a prod, where all three would be \$3,648 per month?

Yes, the monthly price for a STAX instance includes a Dev, Test, and Production environment. They are all provisioned at the same time, and stay provisioned and dedicated for the customer until they discontinue the service.

5. Is there a document that addresses which CNDSP provider has CNDSP coverage from the Application layer, the virtual stack layer, the hypervisor layer, the web or database layer, the operating system layer, the network layer?

Yes, the DISA STAX CONOPS outlines the CNDSP roles and responsibilities for DISA STAX, which can be found at CONOPS: <https://www.intelink.gov/inteldocs/browse.php?fFolderId=329601>.

6. The latest Price Catalog has options for SQL SSAS and SSRS but not SSIS. Is this a typo?

No, these are features that are available for the customer to add on to their STAX service configuration.

7. Is the pricing finalized?

Prices are subject to DISA Comptroller/Director approval and should be used for planning purposes only. Pricing is subject to change based on customer adoption rate in DISA. Prices reflected at the time of order will be honored.

V. SECURITY

1. Which Computer Network Defense Service Provider (CNDSP) provider is responsible for investigating security incidents applicable to the virtual application stacks and the applications themselves?

DISA provides Tier 2/3 CNDSP functions for all STAX infrastructure. The customer is responsible for ensuring control of all data transmitted to and retrieved from the DISA STAX environment, and for the security of any and all customer owned and controlled technical environments. The customer will perform the following:

- Develop applications that will interface and exchange identification and authentication with the known security products utilized by DISA and the DoD sanctioned STIGs and Application IA Controls in accordance with DoDI 8500.2. The DISA STAX provides an API and sample that complies with this requirement.
- Immediately direct any security incidents through Customer security channels and DISA (if affected by the incident).
- The Customer Program Manager (PM) is responsible for following Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6510.01.
- The PM must monitor and respond to IA Vulnerability Alerts (IAVAs) applicable to their AIS. Security patches from the vendor should be no more than one (1) generation old.
- Those Customers, who are given the authority to add, delete, change, and unlock locked system accounts, agree to maintain a copy of the DD Form 2875 for each active user. They also agree to provide a copy of the DD Form 2875 upon request to DISA.
- Ensure comprehensive CND services exist and are operational. The customer is responsible for all CND services not explicitly provided by DISA.

2. How will security incidents be reported to the DISA STAX Helpdesk or Customer Application Helpdesk?

DISA will handle all security incidents related to CND Tier 2 and 3 for STAX and follow its defined incident reporting channels up to USCYBERCOM. The customer will immediately direct any security incident through their security channels, and to the DISA CND-NA service desk.

3. Will ESD DECC and STAX program staff be able to install IAVM and other vendor security patches quickly or will there be a lag period?

Yes, security patches will be updated as required. Any lag in the deployment of security patches will be the result of waiting for customers to finish regression testing their application to ensure the security patch does not impact their end-users. High-priority, mission critical patches will be applied in accordance with CyberCom directives. For more information about the Operating Model Change and Release Management processes, go to <https://community.forge.mil/group/PaaS>.

4. Will customer using application pools be within the same Internet Information Services (IIS) install, or will they need to find a way to run multiple instances of IIS on the same Windows 2008 web server?

The STAX .NET service uses a single IIS installation per physical .NET Application Server. Each STAX .NET customer will be provisioned with their own application pool. Within that application pool, they will implement their web sites. The customers do NOT have access to the application pool, but they do have access to their web site so they can deploy their web application code.

VI. INFRASTRUCTURE

1. Does a JVM mean a running instance of JBOSS and the JBOSS console that can be connected via HTTP(s?) over the VPN? In other words, is that how service code deployments are managed?

Yes, a JVM is a JBoss instance. Each STAX Tenant receives a dedicated JBoss instance, and the customer connects via HTTPS.

2. Would the user would run MySQL console on local laptop and remotely administer the specific DB schema?

For MySQL, the developer would use MySQL Workbench locally and connect remotely to their STAX instance to manage schemas.

3. Operationally speaking, how are "tier two+" admin tasks accomplished? For instance:

JVM tuning

- restarting the JBOSS console
- restarting DB (rare)
- managing properties and keystores
- accessing log files
- configuring shared libraries
- debugging class loader issues

DISA provides a STAX Manager for the customer to centrally manager and administer all their STAX instances and applications in each environment. There are multiple STAX Managers, one for each environment. From the STAX Manager, the customer can:

- Deploy apps
- View logs
- Monitor status
- Stop/start/redeploy apps
- Stop/start JBoss
- Stop/start DB server
- Monitor application transactions, and response times
- Monitor cpu and memory usage per instance

All Java libraries required outside of the standard libraries provided by DISA STAX can be included by the customer, compiled into their program (WAR or EAR file), and deployed to their STAX instance in the DISA STAX cloud. Those libraries are contained within the customer's instance environment. There are no global libraries shared across all STAX customers.

STAX is still working on the management of keystores to make it more self-service. Right now, anything that cannot be performed through the STAX Manager, or handled within the Java technologies inside your application, which includes third-party Java libraries, will require a call to the STAX Service Desk for assistance.

4. **Is the STAX Manager the same as JBoss Admin Console? It seems as if it has some additional features also for controlling the DB. Can customers get a sample of that to get acquainted?**

The STAX Manager is not the same as the JBoss Admin Console. It is a central management utility that simplifies the customer's interface into their STAX environment. It integrates features from several tools allowing us to offer broader capabilities beyond what you can get out of the JBoss Admin Console.

5. **Are the other DISA enterprise services now available from the STAX dev/test/prod environments (JUM/CDN/Monitoring etc.)?**

Yes, Enterprise Messaging, PKI, Enterprise ESB in Oct 2012.

6. **How are web installs performed in STAX? Is there a web interface to drop code, or is there a low privileged account that allows us access to our IIS folders/configurations? Is there an FTP type interface?**

There is a Web Interface to drop code, Java is the STAX Manager, .NET is MS Web Deploy.

7. **Are the Dev & Test zone sizes the same or are they all smalls?**

Development is all smalls and test will be same as the production sizes.

8. **How is the SQL Server database setup, as an instance? Can the customer add as many databases as they want to our instance or do we need DISA to create each DB Shell? What level of access do we have to the DB instance?**

The customer has privileges to create DB schemas and add as many Databases as they want.

9. **Is there a Roadmap for SQL Server 2012, .NET 4.5 etc. If there is no roadmap, how does the customer request upgrades etc.?**

There is a formal process to request enhancements to STAX. New requirements from customers should be sent to disa.stax@mail.mil.